FIG. 1

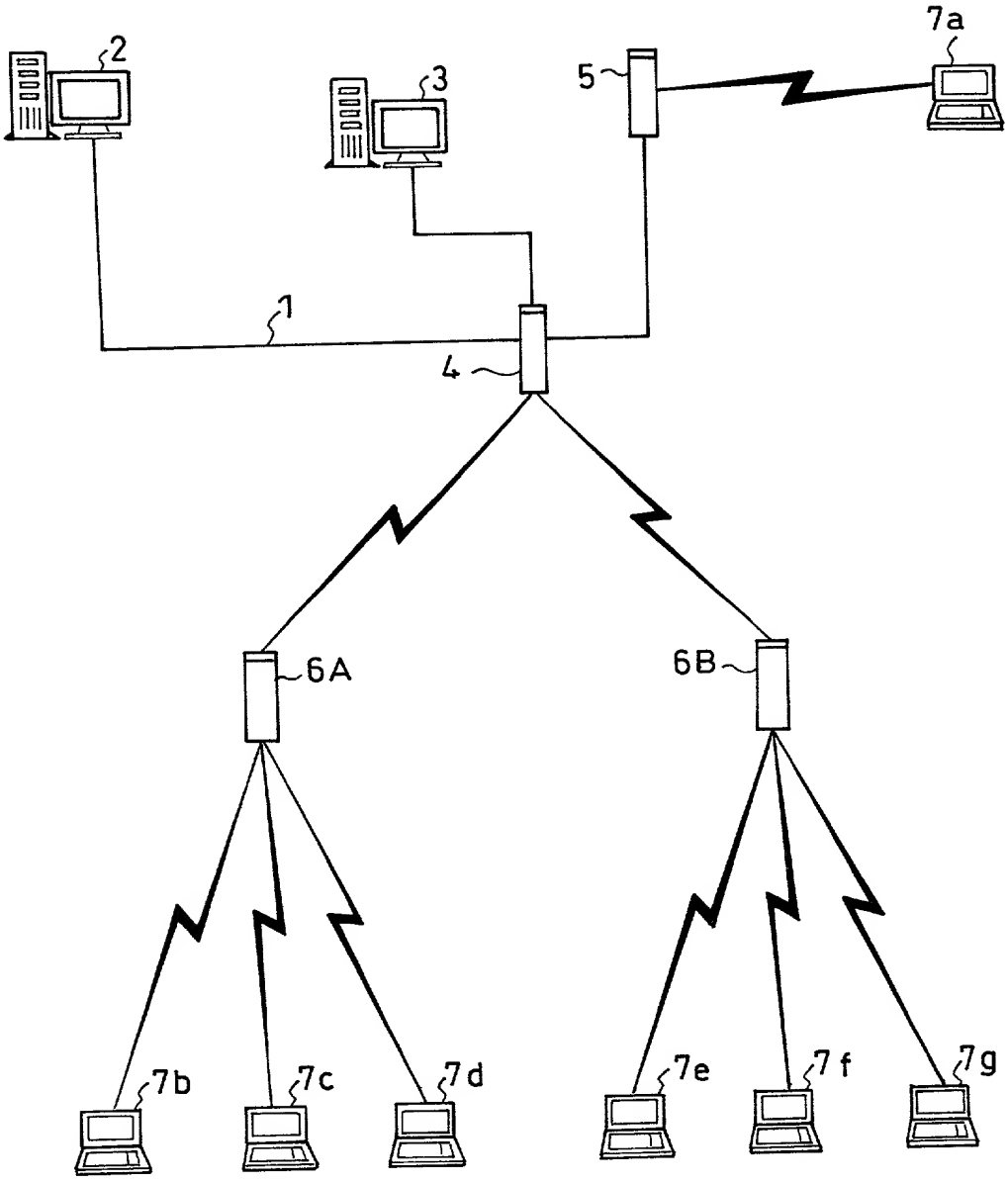

FIG. 2

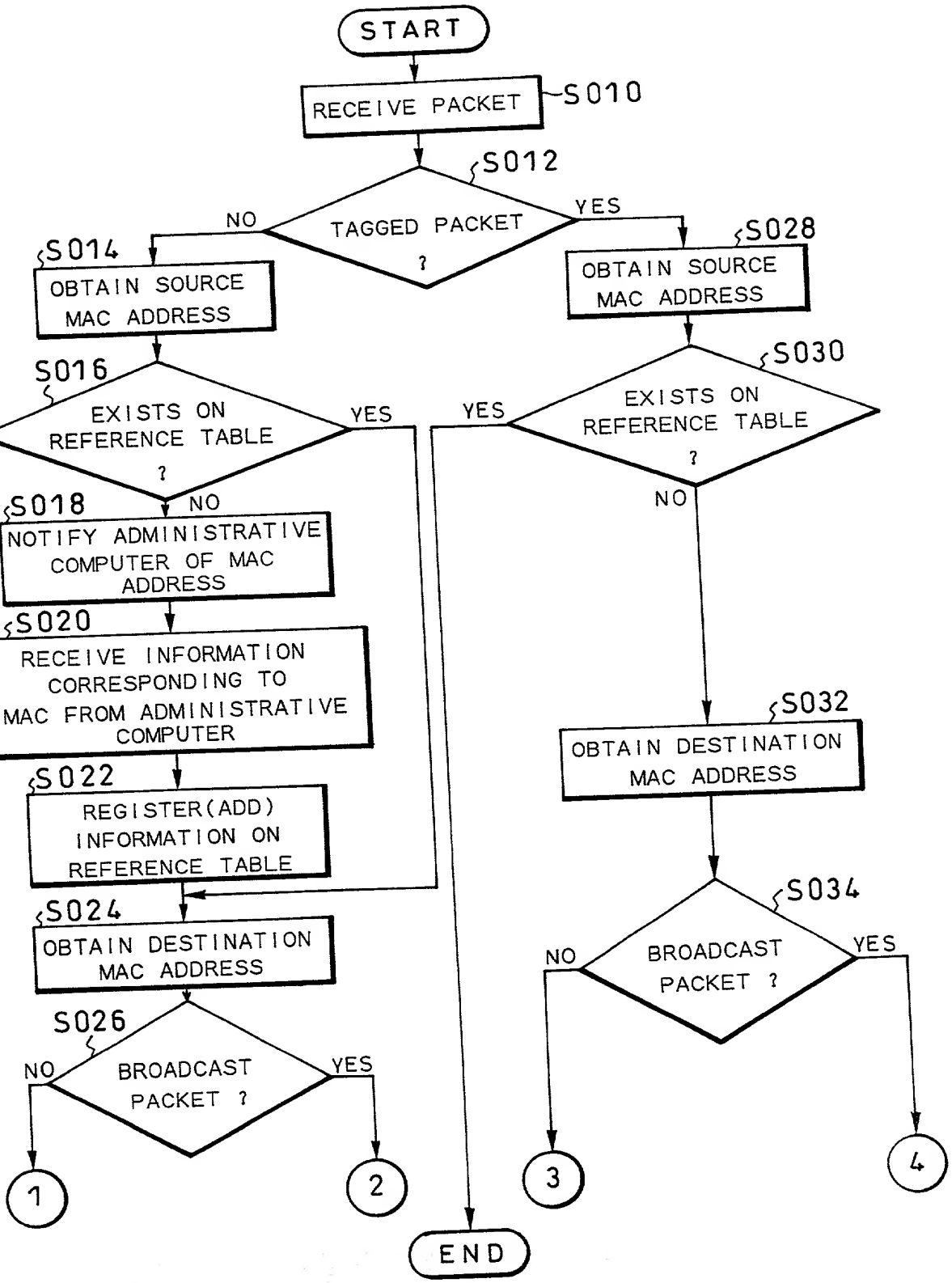
START
RECEIVE PACKET
S010
S012
TAGGED PACKET ?
NO
YES
S014
OBTAIN SOURCE MAC ADDRESS
S016
EXISTS ON REFERENCE TABLE ?
YES
NO
S018
NOTIFY ADMINISTRATIVE COMPUTER OF MAC ADDRESS
S020
RECEIVE INFORMATION CORRESPONDING TO MAC FROM ADMINISTRATIVE COMPUTER
S022
REGISTER(ADD) INFORMATION ON REFERENCE TABLE
S024
OBTAIN DESTINATION MAC ADDRESS
S026
BROADCAST PACKET ?
NO
YES
1
2
S028
OBTAIN SOURCE MAC ADDRESS
S030
EXISTS ON REFERENCE TABLE ?
YES
NO
S032
OBTAIN DESTINATION MAC ADDRESS
S034
BROADCAST PACKET ?
NO
YES
3
4
END

FIG. 3

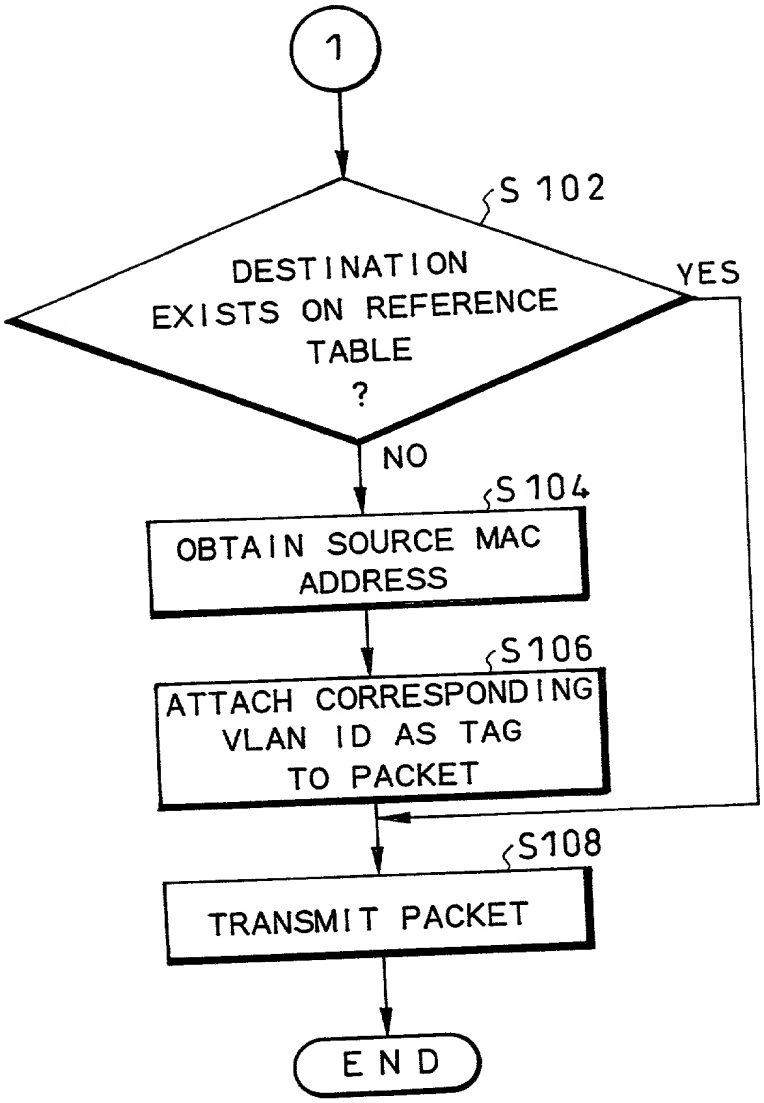
1
S102
DESTINATION EXISTS ON REFERENCE TABLE ?
YES
NO
S104
OBTAIN SOURCE MAC ADDRESS
S106
ATTACH CORRESPONDING VLAN ID AS TAG TO PACKET
S108
TRANSMIT PACKET
END

FIG. 4

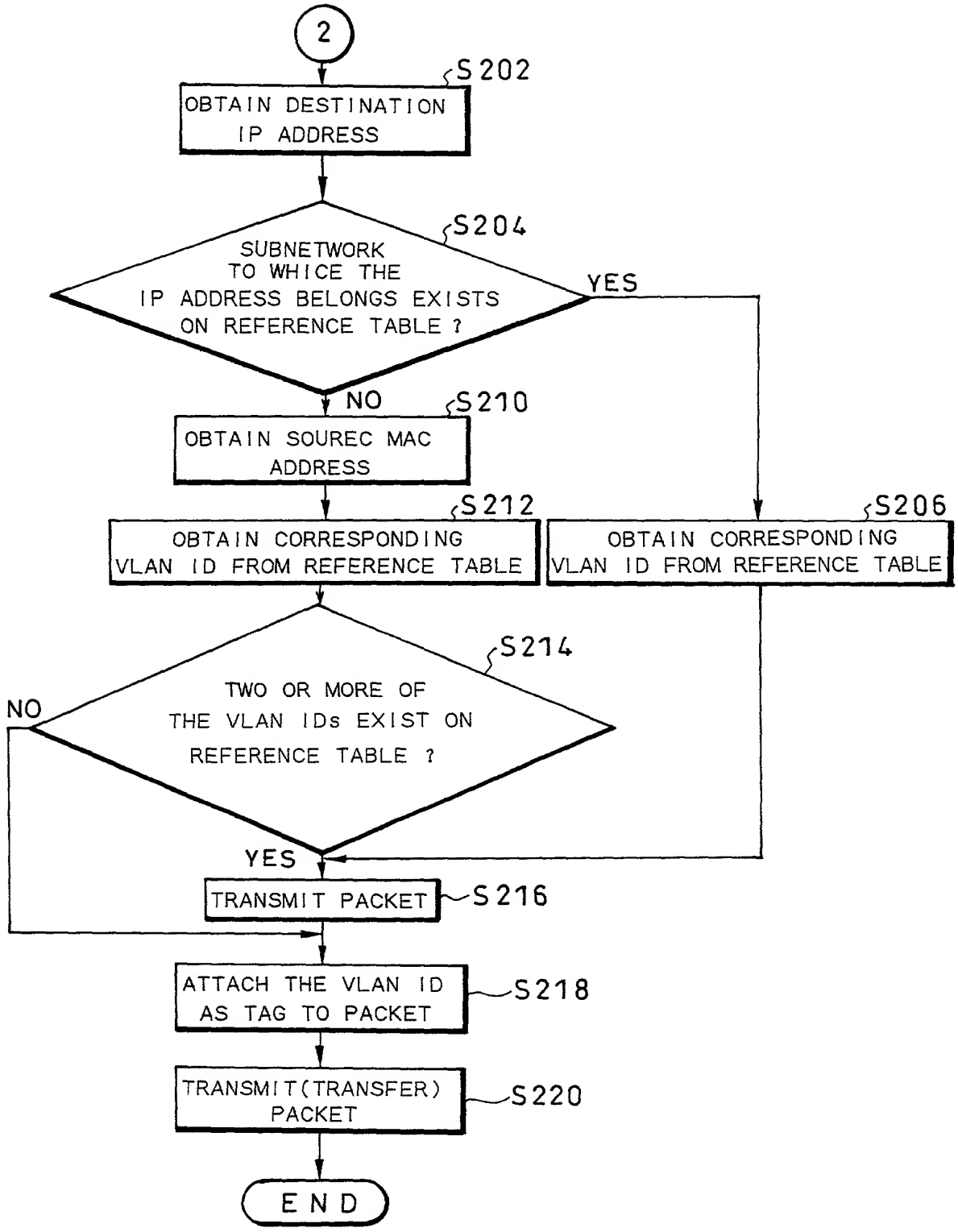
2
S202
OBTAIN DESTINATION IP ADDRESS
S204
SUBNETWORK TO WHICE THE IP ADDRESS BELONGS EXISTS ON REFERENCE TABLE ?
YES
NO
S210
OBTAIN SOUREC MAC ADDRESS
S212
OBTAIN CORRESPONDING VLAN ID FROM REFERENCE TABLE
S206
OBTAIN CORRESPONDING VLAN ID FROM REFERENCE TABLE
S214
TWO OR MORE OF THE VLAN IDs EXIST ON REFERENCE TABLE ?
NO
YES
TRANSMIT PACKET
S216
ATTACH THE VLAN ID AS TAG TO PACKET
S218
TRANSMIT(TRANSFER) PACKET
S220
END

FIG. 5

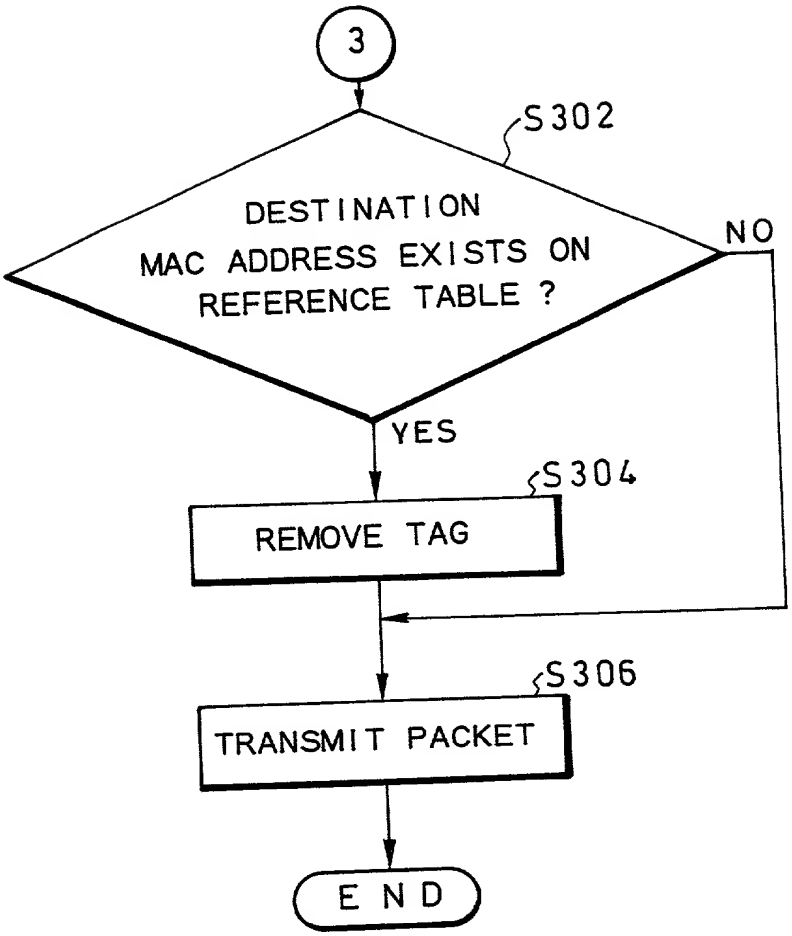

FIG. 6

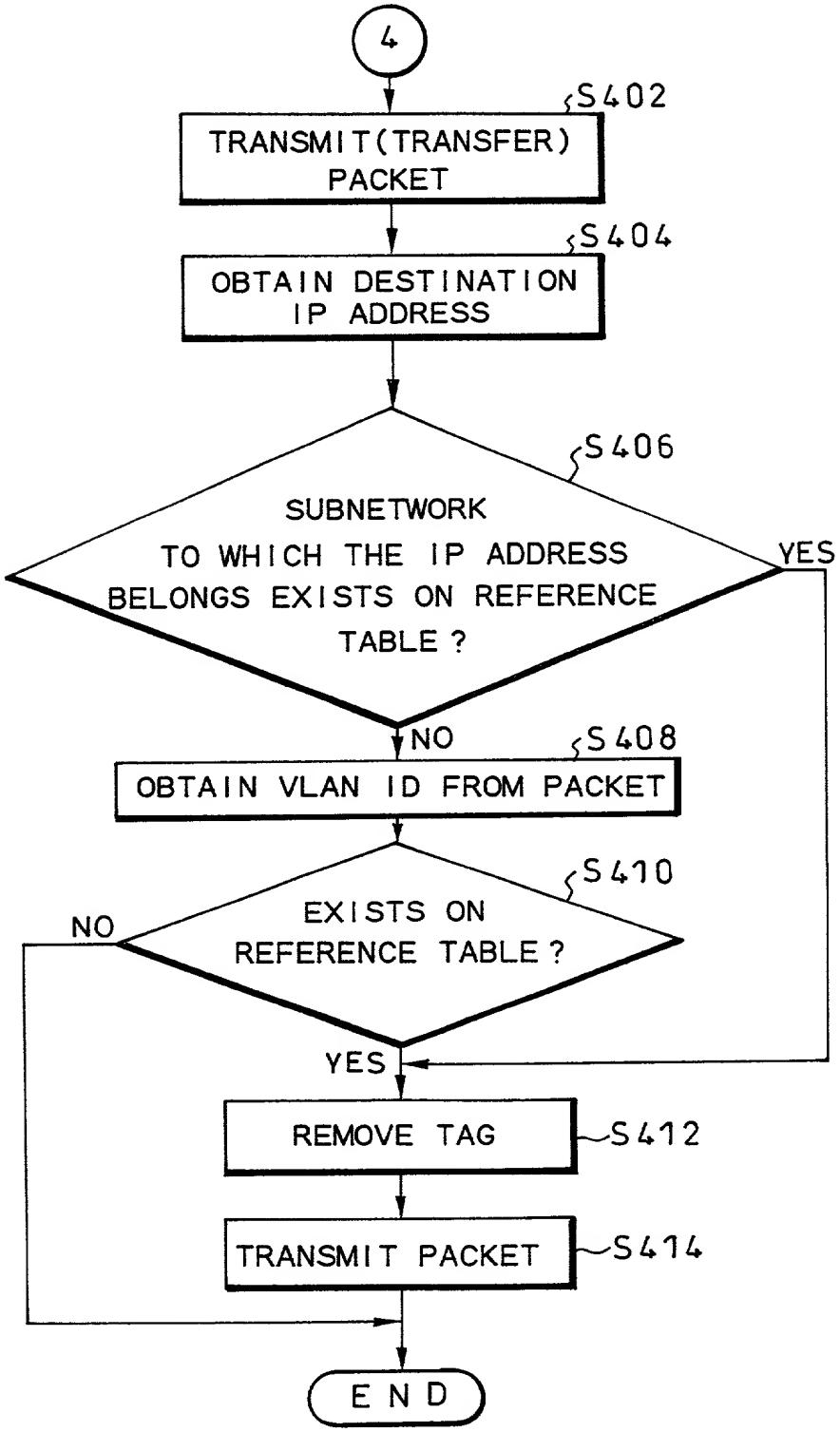
4
S402
TRANSMIT(TRANSFER) PACKET
S404
OBTAIN DESTINATION IP ADDRESS
S406
SUBNETWORK TO WHICH THE IP ADDRESS BELONGS EXISTS ON REFERENCE TABLE ?
YES
NO
S408
OBTAIN VLAN ID FROM PACKET
S410
EXISTS ON REFERENCE TABLE ?
NO
YES
REMOVE TAG
S412
TRANSMIT PACKET
S414
END

FIG.7(A)

VLAN GROUP	MAC ADDRESS
VLAN1	XXXX1

FIG.7(B)

VLAN GROUP	MAC ADDRESS
VLAN1	XXXX2
	XXXX3
VLAN2	XXXX4

FIG.7(C)

VLAN GROUP	MAC ADDRESS
VLAN2	XXXX5
VLAN3	XXXX6
	XXXX7

FIG. 8

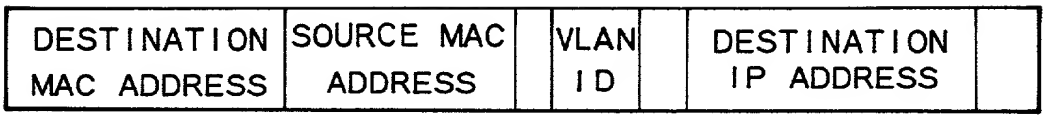

FIG. 9

MAC ADDRESS	VLAN IP	IP ADDRESS	SUBNET MASK
00-11-22-33-44-55	17	192.168.17.32	255.255.255.0
11-22-33-44-55-66	23	192.168.23.32	255.255.255.0
⋮	⋮	⋮	⋮

FIG. 10

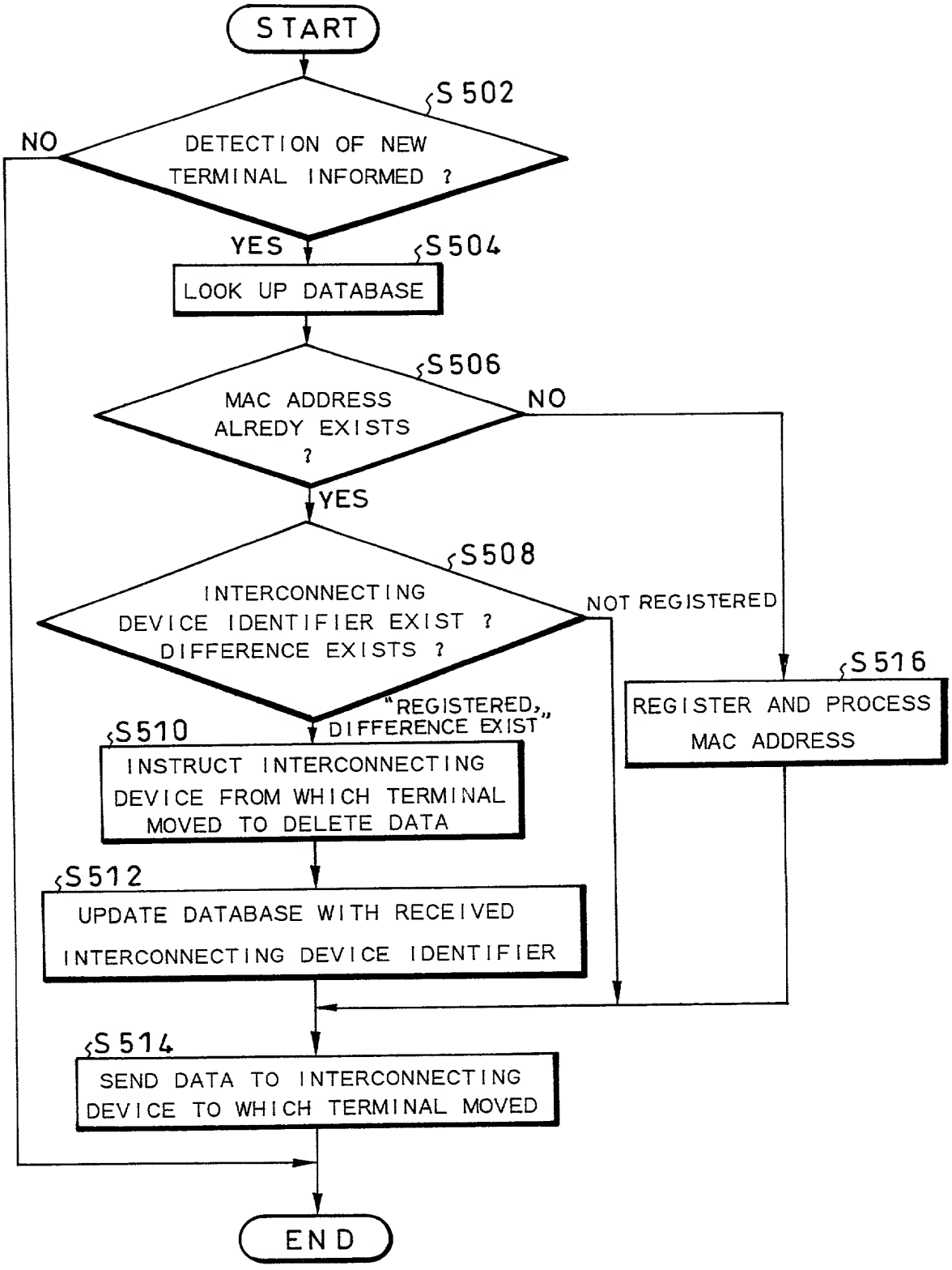
START
S502
DETECTION OF NEW TERMINAL INFORMED ?
NO
YES
S504
LOOK UP DATABASE
S506
MAC ADDRESS ALREDY EXISTS ?
NO
YES
S508
INTERCONNECTING DEVICE IDENTIFIER EXIST ? DIFFERENCE EXISTS ?
NOT REGISTERED
"REGISTERED," DIFFERENCE EXIST
S516
REGISTER AND PROCESS MAC ADDRESS
S510
INSTRUCT INTERCONNECTING DEVICE FROM WHICH TERMINAL MOVED TO DELETE DATA
S512
UPDATE DATABASE WITH RECEIVED INTERCONNECTING DEVICE IDENTIFIER
S514
SEND DATA TO INTERCONNECTING DEVICE TO WHICH TERMINAL MOVED
END

FIG. 11

VLAN GROUP	USER ID	PASSWORD	MAC ADDRESS	VLAN ID	IP ADDRESS	SUBNET MASK	INTERCONNECTING DEVICE
VLAN1	aaaaa	*****	00-22-37-AB-66-83	17	192.168.17.32	255.255.255.0	6B
	bbbbb	*****					
			00-51-86-CD-76-10	17	192.168.17.XX	255.255.255.0	6A
	⋮	⋮	⋮	⋮	⋮	⋮	
VLAN2	ddddd	*****					
			00-01-27-EF-60-11	XX	192. ~ 3X	255. ~ X	7a
	fffff	*****	00-00-10-GF-51-20	XX	~	~	
	⋮	⋮	⋮				
VLAN3	ggggg	*****	00-11-02-HI-12-35	XX			
	hhhhh	*****					
	iiiii	*****					
	⋮	⋮	⋮	⋮	⋮	⋮	⋮
	⋮	⋮	⋮	⋮	⋮	⋮	⋮

FIG. 12

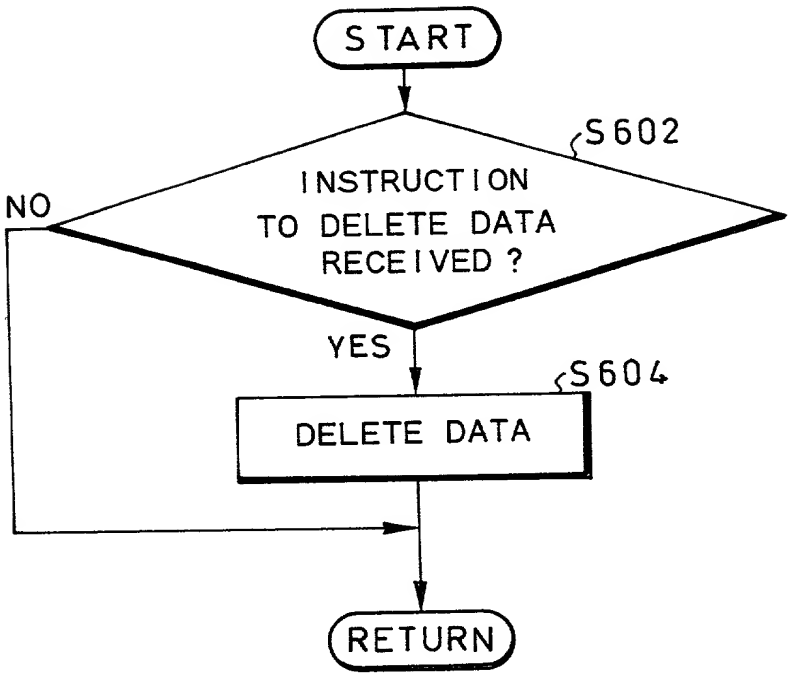
START
S602
INSTRUCTION TO DELETE DATA RECEIVED ?
NO
YES
S604
DELETE DATA
RETURN

FIG. 13